



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/089,896	07/16/2002	Robin B. Somerville	656096	1107
24106	7590	09/27/2004		
HARRISON & EGBERT 412 MAIN STREET 7TH FLOOR HOUSTON, TX 77002			EXAMINER JOHNSON, JERRY D	
			ART UNIT	PAPER NUMBER
			1764	

DATE MAILED: 09/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/089,896

Applicant(s)

SOMERVILLE ET AL.

Examiner

Jerry D. Johnson

Art Unit

1764

[Handwritten signature]

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 July 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Art Unit: 1764

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 21-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith.

Smith, U.S. Patent 4,226,601, teaches a process for preparing a coal or lignite fuel, which contains sulfur, for combustion (col. 1, lines 16-18). Sulfur-containing coal or lignite is reduced in size to form a finely divided coal or lignite. The thus pulverized sulfur-containing coal or lignite is then admixed with a finely divided inorganic material (col. 2, lines 41-43). The inorganic material can be, *inter alia*, a hydroxide of calcium (col. 2, lines 50-56). It has been found that as the particle size of the coal or lignite decreases, the efficiency of the invention in reducing the emissions of sulfur containing air contaminants increases. Thus there is no minimum size restriction placed on the particle size of the coal or lignite (col. 3, lines 14-22). When the inorganic materials are added to the coal or lignite in an aqueous or slurry form, substantially all of the solvent or liquid carrier should be evaporated or otherwise removed from the admixture to leave a substantially dry admixture for burning (col. 4, lines 2-6). The inorganic materials should have a particle size in the general range of the particle sizes for the sulfur containing coal or lignite (col. 4, lines 14-17). The pulverized coal or lignite and the finely divided inorganic materials can be intimately admixed together by any suitable means (col. 4, lines 31-33). The amount of inorganic material that will be added to and admixed with the pulverized coal or lignite will depend on the amount of sulfur that is contained in the raw coal or lignite (col. 5, lines 59-62). While Smith teaches that the inorganic materials may be

Art Unit: 1764

added to the particulate coal in aqueous or slurry form as opposed to the claimed method of adding water to a mixture of particulate coal and hydrated lime, it would have been obvious to one having ordinary skill in the art at the time the invention was made to add water after mixing to the coal and inorganic material in order to obtain the same composition, i.e., a mixture comprising particulate coal, hydrated lime and water. Further, to the extent that Smith does not teach the specifically recited numerical values (e.g., temperature or particle size), it would have been obvious to one having ordinary skill in the art to follow the above teachings and arrive at the instantly claimed invention based on optimization of the various process steps, including conducting said process steps in a continuous process.

Applicant's arguments filed July 12, 2004 have been fully considered but they are not persuasive.

Applicants argue

[t]he prior art Smith patent teaches the use of calcium hydroxide, i.e., hydrated lime. However, the Smith patent does not specifically teach the use of “fresh” hydrated lime or “fresh” calcium hydroxide. In fact, many of the practices taught in the Smith patent inevitably lead to the prolonged exposure of the calcium hydroxide to the atmosphere. (Remarks, page 7).

Applicants' argument lacks merit.

As noted above, Smith teaches the addition of calcium hydroxide—not calcium carbonate—and it is well known that calcium hydroxide absorbs carbon dioxide from the atmosphere to form calcium carbonate. Accordingly, one having ordinary skill in the art would be motivated to use calcium hydroxide as taught by Smith, i.e., “fresh” calcium hydroxide not containing significant amounts of calcium carbonate.

Applicants argue

Art Unit: 1764

[i]n the present invention, the proper adjustment of moisture content is achieved through the addition or removal of water. As a result, lime itself serves as the binder. The binders used in the Smith patent are lignin, coal tar pitch and petroleum pitch. (Remarks, page 9).

Applicants' argument lacks merit.

Smith also teaches the addition and removal of the solvent or liquid carrier (col. 4, lines 2-6). Furthermore, applicants' "comprising" claims do not exclude the binders of Smith.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

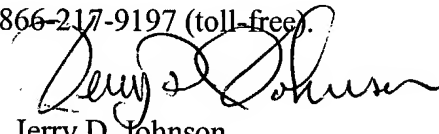
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerry D. Johnson whose telephone number is (571) 272-1448. The examiner can normally be reached on 6:00-3:30, M-F, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glen Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1764

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jerry D. Johnson
Primary Examiner
Art Unit 1764

jdj